

APPENDIX C
ADOPTED MITIGATION MEASURES

**East County Substation Project 138-Kilovolt
Transmission Line**

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INTRODUCTION

All mitigation measures presented in the Final Environmental Impact Statement/Environmental Impact Report (FEIS/FEIR) that apply to the BLM's Preferred Alternative for the East County (ECO) Substation Project 138-kilvolt (kV) Transmission Line are listed below. In addition, since publication of the FEIS/FEIR, Mitigation Measures CUL-1A, CUL-1D, FF-3, and FF-4 were revised and included in an errata to the FEIS/FEIR. These minor revisions are reflected in the mitigation measures included herein. Measures are presented by environmental discipline in the order they are presented in the EIS/EIR. Following the mitigation measures are the Applicant Proposed Measures (APMs) that San Diego Gas & Electric (SDG&E) presented in its Proponent's Environmental Assessment for the Proposed Action.

Table 1, Mitigation Measures Applicable to the Selected Alternative, provides an overview of the mitigation measures and Applicant Proposed Measures that apply to the 138 kV transmission line on BLM-managed lands.

Table 1. Mitigation Measures Applicable to the Selected Alternative

Construction Components	138 kV Transmission Line
BIO-1a. Confine all construction and construction-related activities to the minimum necessary area as defined by the final engineering plans.	☒
BIO-1b. Conduct contractor training for all construction staff.	☒
BIO-1c. Conduct biological construction monitoring.	☒
BIO-1d. Restore all temporary construction areas pursuant to a Habitat Restoration Plan.	☒
BIO-1e. Provide habitat compensation or restoration for permanent impacts to native vegetation communities.	☒
BIO-1f. Implement fire prevention best management practices during construction and operation activities.	☒
BIO-1g. Prepare and implement a Stormwater Pollution Prevention Plan.	☒
BIO-2a. Limit temporary and permanent impacts to jurisdictional features to the minimum necessary as defined by the final engineering plans.	☒
BIO-2b. Implement habitat creation, enhancement, preservation, and/or restoration pursuant to a wetland mitigation plan to ensure no net loss of jurisdictional waters and wetlands.	☒
BIO-2c. Where drainage crossings are unavoidable, construct access roads at right angles to drainages.	☒
BIO-3a. Prepare and implement a Noxious Weeds and Invasive Species Control Plan.	☒
BIO-4a. Prepare and implement a Dust Control Plan.	☒
BIO-5a. Install fencing or flagging around identified special-status plant species populations in the construction areas	☒
BIO-5b. Implement special-status plant species compensation.	☒
BIO-7a. Cover and/or provide escape routes for wildlife from excavated areas and monitor these areas daily.	☒
BIO-7b. Enforce speed limits in and around all construction areas.	☒
BIO-7c. Minimize night construction lighting adjacent to native habitats.	☒

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Construction Components	138 kV Transmission Line
BIO-7d. Prohibit littering and remove trash from construction areas daily	☑
BIO-7e. Prohibit the harm, harassment, collection of, or feeding of wildlife.	☑
BIO-7f. Obtain and implement the terms of agency permit(s) with jurisdiction federal or state listed species.	☑
BIO-7j. Conduct pre-construction nesting bird surveys and implement appropriate avoidance measures for identified nesting birds.	☑
BIO-11a. Conduct maintenance activities resulting in vegetation disturbance outside of the bird nesting season or conduct pre-construction nesting bird surveys.	☑
APMs ECO-BIO-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 13, 14, 15, 19, 21, 22, 23, 24, 26, 27, 28, 29, and 30	☑
APMs ECO-BIO-12, 16, 17, 20, and 25	☑
VIS-3a. Reduce visibility of construction activities and equipment.	☑
VIS-3b. Reduce construction night-lighting impacts.	☑
VIS-3c. Reduce construction impacts to natural features.	☑
VIS-3d. Reduce in-line views of land scars.	☑
VIS-3e. Reduce visual contrast from unnatural vegetation lines.	☑
VIS-3f. Minimize vegetation removal.	☑
VIS-3m. Reduce visual impacts resulting from native tree removal.	☑
APM ECO-AES-04	☑
LU-1a. Prepare Construction Notification Plan.	☑
LU-1b. Notify property owners and provide access.	☑
LU-2. Revise project elements to minimize land use conflicts.	☑
WR-1. Provide notice for access restrictions or anticipated closures to wilderness and recreation areas.	☑
CUL-1A. Develop and implement a Historic Properties Treatment Plan-Cultural Resources Management Plan.	☑
CUL-1B. Avoid and Protect Significant Resources.	☑
CUL-1C. Training for Contractor.	☑
CUL-1D. Construction Monitoring.	☑
CUL-1E. Discovery of Unknown Resources.	☑
CUL-1F. Control Unauthorized Access.	☑
CUL-1G. Funding of Law Enforcement Patrols.	☑
CUL-1H. Continue Consultation with Native Americans and Other Traditional Groups.	☑
CUL-2. Human Remains.	☑
APMs ECO-CUL-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11	☑
PALEO-1A. Inventory and evaluate paleontological resources in the Final APE.	☑
PALEO-1B. Develop Paleontological Monitoring and Treatment Plan.	☑
PALEO-1C. Monitor Construction for Paleontology.	☑
PALEO-1D. Conduct Paleontological Data Recovery.	☑
PALEO-1E. Train Construction Personnel.	☑
NOI-1. Blasting Plan.	☑
APMs ECO-NOI-1, 2, and 4	☑

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Construction Components	138 kV Transmission Line
TRA-1. Prepare and implement a Traffic Control Plan.	☒
TRA-2. Repair roadways damaged by construction activities.	☒
HAZ-1a. Hazardous Materials Management Plan.	☒
HAZ-1b. Health and Safety Program.	☒
HAZ-1c. Waste Management Plan.	☒
HAZ-2b. Contingency plan for encountering contaminated soils.	☒
HAZ-3. Soil testing for lead contamination.	☒
HAZ-4a. Safety Assessment.	☒
HAZ-4b. Blasting Plan.	☒
PS-2. Determine proper grounding procedures and implement appropriate grounding measures.	☒
AQ-1. Emissions control during construction activities.	☒
AQ-2. Construction fleet emissions control.	☒
APMs ECO-AIR-01, 02, 03, 04, 05, 06, 07, 08, 09, 10 and 11	☒
HYD-1. A Stormwater Pollution Prevention Plan shall be prepared to reduce soil erosion during construction.	☒
HYD-2. Avoidance and preventative measures to protect local groundwater during excavation.	☒
HYD-3. Identification of sufficient water supply.	☒
HYD-5. Implementation of creek-crossing procedures.	☒
HYD-6. Horizontal Directional Drill Contingency Plan.	☒
HYD-7. Bury power line below 100-year scour depth.	☒
APMs ECO-HYD-01 and 02	☒
GEO-1. Erosion Control and Sediment Transport Control Plan.	☒
GEO-2. Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.	☒
GEO-3. Conduct geotechnical investigations.	☒
GEO-4. Facilities inspections conducted following major seismic event.	☒
APM ECO-GEO-1	☒
APMs ECO-HAZ-01, 04, 05, and 06	☒
PSU-1a. Notification of utility service interruption.	☒
PSU-1b. Protect underground utilities.	☒
PSU-1c. Coordinate with utility providers.	☒
FF-1. Develop and implement a Construction Fire Prevention/Protection Plan.	☒
FF-2. Revise the Wildland Fire Prevention and Fire Safety Electric Standard Practice Plan (2009) to Create the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational Maintenance Plan.	☒
FF-3. Provide Assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA).	☒
FF-4. Customized Fire Protection Plan for Project.	☒
FF-6. Funding for FireSafe Council.	☒
FF-7. Preparation of Disturbed Area Revegetation Plan.	☒

Biological Resources

- BIO-1a. Confine all construction and construction-related activities to the minimum necessary area as defined by the final engineering plans.** All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. An environmental monitor shall complete regular observations to ensure that all work is completed within the approved work limits, and in the event any work occurs beyond the approved limits, it shall be reported. During and after construction, entrances to access roads shall be gated to prevent the unauthorized use of these construction access roads by the general public. Signs prohibiting unauthorized use of the access roads shall be posted on these gates. In addition, to control unauthorized use of project access roads by off-road vehicle enthusiasts, the applicants shall provide funding to land management entities responsible for areas set aside for habitat conservation to provide for off-road vehicle enforcement patrols. The responsible land management entities will formulate what funding is reasonable to control unauthorized use of project access roads.
- BIO-1b. Conduct contractor training for all construction staff.** Prior to construction, all developer, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to implement the mitigation measures and comply with environmental regulations, including plant and wildlife species avoidance, impact minimization, and best management practices. Sign-in sheets and hardhat decals shall be provided that document contractor training has been completed for construction personnel.
- BIO-1c. Conduct biological construction monitoring.** An authorized biological monitor must be present at the construction sites during all ground disturbing and vegetation removal activities. The monitor shall survey the construction sites and surrounding areas for compliance with all environmental specifications. Weekly biological construction monitoring reports shall be prepared and submitted to the appropriate permitting and responsible agencies through the duration of the ground disturbing and vegetation removal construction phase. Monthly biological construction monitoring reports shall be prepared and submitted through the duration of project construction to document compliance with environmental requirements.

- BIO-1d. Restore all temporary construction areas pursuant to a Habitat Restoration Plan.** All temporary work areas not subject to long-term use or ongoing vegetation maintenance shall be revegetated with native species characteristic of the adjacent native vegetation communities in accordance with a Habitat Restoration Plan. A habitat restoration specialist will be designated and approved by the California Public Utilities Commission and Bureau of Land Management and will determine the most appropriate method of restoration. Restoration techniques may include: hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. The Habitat Restoration Plan shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. At the completion of project construction, all construction materials shall be completely removed from the site. All temporary construction access roads shall be permanently closed and restored. Topsoil located in areas to be restoration would be conserved and stockpiled during the excavation process for use in the restoration. Wherever possible, vegetation would be left in place to avoid excessive root damage to allow for natural recruitment following construction. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the CPUC or BLM (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the CPUC or BLM, the temporary impact shall be considered a permanent impact and compensated accordingly (see MM BIO-1e).
- BIO-1e. Provide habitat compensation or restoration for permanent impacts to native vegetation communities.** Permanent impact to all native vegetation communities shall be compensated through a combination habitat compensation and habitat restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Habitat compensation shall be accomplished through agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the ECO Substation Project. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as compensation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to a Habitat Restoration Plan, which includes success criteria and monitoring specifications as described above for Mitigation Measure BIO-1d. The Habitat Restoration Plan shall be approved by the permitting

agencies prior to construction of the project. All habitat compensation and restoration used as mitigation for the ECO Substation Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the ECO Substation Project on private lands shall include long-term management and legal protection assurances.

- BIO-1f. Implement fire prevention best management practices during construction and operation activities.** Fire prevention best management practices shall be implemented during construction and operation of the project as specified by the Construction Fire Prevention/Protection Plan (to be developed as required under Mitigation Measure FF-1) and Wildland Fire Prevention and Fire Safety Electric Standard Practice Operation and Maintenance Plan (to be revised as required under Mitigation Measure FF-2).
- BIO-1g. Prepare and implement a Stormwater Pollution Prevention Plan.** Prepare a Stormwater Pollution Prevention Plan pursuant to the specifications described in Mitigation Measure HYD-1.
- BIO-2a. Limit temporary and permanent impacts to jurisdictional features to the minimum necessary as defined by the final engineering plans.** Obtain and implement the terms and conditions of agency permit(s) for unavoidable impacts to jurisdictional wetlands and waters. All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas within the approved work limits identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. The project applicant shall obtain applicable permits and provide evidence of permit approval, which may include but not be limited to a Clean Water Act Section 404 Permit, a Clean Water Act Section 401 water quality certification, and a Section 1602 streambed alteration agreement with the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game for impacts to jurisdictional features prior to project construction. The terms and conditions of these authorizations shall be implemented.
- BIO-2b. Implement habitat creation, enhancement, preservation, and/or restoration pursuant to a wetland mitigation plan to ensure no net loss of jurisdictional waters and wetlands.** Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination habitat creation (i.e.,

establishment), enhancement, preservation, and/or and restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration. Restoration techniques may include hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the CPUC or BLM (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the CPUC or BLM, the temporary impact shall be considered a permanent impact and compensated accordingly. All habitat creation and restoration used as mitigation for the Proposed ECO Substation Project on public lands shall be located in areas designated for resource protection and management. All habitat creation and restoration used as mitigation for the project on private lands shall include long-term management and legal protection assurances.

BIO-2c. Where drainage crossings are unavoidable, construct access roads at right angles to drainages. Unless not possible due to existing landforms or site constraints, access roads shall be built perpendicular to drainages to minimize the impacts to these resources and prevent impacts along the length of jurisdictional features.

BIO-3a. Prepare and implement a Noxious Weeds and Invasive Species Control Plan. A Noxious Weeds and Invasive Species Control Plan shall be prepared and reviewed by the California Public Utilities Commission/Bureau of Land Management and applicable permitting agencies. On BLM lands, the plan shall be consistent with an Integrated Pest Management approach per the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report (2007). The plan shall be implemented during all phases of project construction and operation. The plan shall include best management practices to avoid and minimize the direct or indirect effect of the establishment and spread of invasive plant species during construction. Implementation of specific protective measures shall be required during construction, such as cleaning vehicles prior to off-road use, using weed-free imported soil/material, restricted vegetation removal and requiring topsoil storage.

Development and implementation of weed management procedures shall be used to monitor and control the spread of weed populations along the construction access and transmission line right-of-ways. Vehicles used in transmission line construction shall be cleaned prior to operation off of maintained roads. Existing vegetation shall be cleared only from areas scheduled for immediate construction work and only for the width needed for active construction activities. Noxious weed management shall be conducted annually to prevent the establishment and spread of invasive plant species. This shall include weed abatement efforts, targeted at plants listed as invasive exotics by the California Exotic Plant Pest Council in their most recent “A” or “Red Alert” list. Only herbicides approved by BLM in California will be used on BLM lands. Herbicide application can only occur on BLM lands with an approved Pesticide Use Proposal (PUP). Pesticide use should be limited to non-persistent pesticides and should only be applied in accordance with label and application permit directions and restrictions for terrestrial and aquatic applications.

BIO-4a. Prepare and implement a Dust Control Plan. The project proponent shall (a) pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas if construction activity causes persistent visible emissions of fugitive dust beyond the work area; (b) pre-water sites up to 48 hours in advance of clearing to control fugitive dust; (c) reduce the amount of disturbed area where feasible; (d) spray all dirt stock-pile areas daily as needed; (e) cover loads in haul trucks or maintain at least 6 inches of free-board when traveling on public roads; (f) pre-moisten, prior to transport, import and export dirt, sand, or loose materials; (g) sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets or wash trucks and equipment before entering public streets; (h) plant vegetative ground cover in disturbed areas to meet the criteria of the revegetation plan; (i) apply chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands that are unused for 14 consecutive days); and (j) prepare and file with the San Diego Air Pollution Control District, Bureau of Land Management and California Public Utilities Commission a Dust Control Plan that describes how these measures would be implemented and monitored at all locations of the project. This plan shall be developed consistent with the requirements of Mitigation Measure AQ-1.

BIO-5a. Install fencing or flagging around identified special-status plant species populations in the construction areas. Prior to the start of construction, a

qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species for all construction areas. All of the special-status plant locations shall be recorded using a Global Positioning System (GPS), which will be used to site the avoidance fencing/flagging. Special-status plant species shall be avoided to the maximum extent possible by all construction activities. The boundaries of all special-status plant species to be avoided shall be delineated in the field with clearly visible fencing or flagging. The fencing/flagging shall be maintained for the duration of project construction activities.

- BIO-5b. Implement special-status plant species compensation.** Impacts to special-status plant species shall be maximally avoided. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation and/or plant salvage and relocation. Where off-site land preservation is biologically preferred, the land shall contain comparable special-status plant resources as the impacted lands and shall include long-term management and legal protection assurances to the satisfaction of the CPUC or BLM. Land preservation must be completed within 18 months of permit issuance. Where salvage and relocation is demonstrated to be feasible and biologically preferred, it shall be conducted pursuant to an agency-approved plan that details the methods for salvage, stockpiling, and replanting, as well as the characteristics of the receiver sites. Any salvage and relocation plans shall be approved by the permitting agencies prior to project construction. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. Success criteria and monitoring shall also be included in the plan. If salvage and relocation is not possible to the satisfaction of the CPUC or BLM, off-site land preservation shall be required.
- BIO-7a. Cover and/or provide escape routes for wildlife from excavated areas and monitor these areas daily.** All steep trenches and excavations during construction shall be inspected twice daily (i.e., morning and evening) by a qualified biologist to monitor for wildlife entrapment. Large/steep excavations shall be covered and/or fenced nightly to prevent wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.
- BIO-7b. Enforce speed limits in and around all construction areas.** Vehicles shall not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site or 10 miles per hour during the night.

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Adopted Mitigation Measures

- BIO-7c. Minimize night construction lighting adjacent to native habitats.** Lighting of construction areas at night shall be the minimum necessary for personnel safety and shall be low illumination, selectively placed, and directed/shielded appropriately to minimize lighting in adjacent native habitats.
- BIO-7d. Prohibit littering and remove trash from construction areas daily.** Littering shall not be allowed by the project personnel. All food-related trash and garbage shall be removed from the construction sites on a daily basis.
- BIO-7e. Prohibit the harm, harassment, collection of, or feeding of wildlife.** Project personnel shall not harm, harass, collect, or feed wildlife. No pets shall be allowed in the construction areas.
- BIO-7f. Obtain and implement the terms of agency permit(s) with jurisdiction federal or state listed species.** If determined necessary, the applicant shall obtain a biological opinion through Section 7 consultation between the Bureau of Land Management and U.S. Fish and Wildlife Service for impacts to federally listed wildlife species and a Section 2081 permit (or consistency determination) from the California Department of Fish and Game for impacts to state listed wildlife species resulting from this project, if applicable. The terms and conditions included in these authorizations shall be implemented, which may include seasonal restrictions, relocation, monitoring/reporting specifications, and/or habitat compensation through restoration or acquisition of suitable habitat.
- BIO-7j. Conduct pre-construction nesting bird surveys and implement appropriate avoidance measures for identified nesting birds.** If the project must occur during the avian breeding season (February 1st to August 31st, and as early as January 1 for some raptors), SDG&E should work with the California Department of Fish and Game (CDFG), Bureau of Land Management, and the U.S. Fish and Wildlife Service (USFWS) to prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds.

SDG&E will submit to the agencies the NBMMRP (see following for details) for review and approval prior to commencement of the project during the breeding season. The NBMMRP should include the following:

1. Nest Survey Protocols describing the nest survey methodologies
2. A Management Plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks

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3. A Monitoring and Reporting Plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFWS and CDFG to monitor SDG&E's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513
4. A schedule for the submittal (usually weekly) of the NML
5. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks
6. A detailed explanation of how the buffer widths were determined
7. All measures SDG&E will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting.

To determine presence of nesting birds that the project activities may affect, surveys should be conducted beyond the project area—300 feet for passerine birds and 500 feet for raptors. The survey protocols should include a detailed description of methodologies utilized by CDFG-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols should include but are not limited to the size of project corridor being surveyed, method of search, and behavior that indicates active nests.

Each nest identified in the project area should be included in the NML. The NMLs should be updated daily and submitted to the CDFG weekly. Since the purpose of the NMLs is to allow the CDFG to track compliance, the NMLs should include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs should provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs will allow for tracking the success and failure of the buffers and will provide data on the adequacy of the buffers for certain species.

SDG&E will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on

the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths should be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths should consider the following factors:

- a. Nesting chronologies
- b. Geographic location
- c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise)
- d. Type and extent of disturbance (e.g., noise levels and quality—punctuated, continual, ground vibrations—blasting-related vibrations proximate to tern colonies are known to make the birds flush the nests)
- e. Visibility of disturbance
- f. Duration and timing of disturbance
- g. Influence of other environmental factors
- h. Species' site-specific level of habituation to the disturbance.

Application of the standard buffer widths should avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened.

- BIO-11a. Conduct maintenance activities resulting in vegetation disturbance outside of the bird nesting season or conduct pre-construction nesting bird surveys.** Maintenance activities with the potential to result in direct or indirect habitat disturbance, most notably vegetation management, shall be conducted outside of the bird nesting season to the maximum extent practicable. Where avoidance is not possible, the project proponent shall conduct pre-construction nesting bird surveys consistent with the requirements of the NCCP to determine the presence/absence of active nests in or adjacent to construction areas. If active nests are identified, appropriate avoidance measures would be identified and implemented to prevent

disturbance to the nesting bird(s). If federal or state listed nesting birds are identified, the project proponent shall contact the U.S. Fish and Wildlife Service and/or California Department of Fish and Game to determine the appropriate course of action.

Visual Resources

VIS-3a. Reduce visibility of construction activities and equipment. If visible from nearby roads, residences, public gathering areas, or recreational areas, facilities, or trails, stationary construction sites and staging areas and fly yards shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Where practical, construction staging and storage will be screened with opaque fencing from close-range residential views. Additionally, construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use shall be avoided. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days before the start of construction.

VIS-3b. Reduce construction night-lighting impacts. SDG&E shall design and install all lighting at construction and storage yards and at staging areas and fly yards such that illumination of the project facilities, vicinity, and nighttime sky is minimized. The Construction Lighting Mitigation Plan shall be reviewed for consistency with the County of San Diego Light Pollution Code (Section 59.100 et. al) and Sections 6322 and 6322 of the Zoning Ordinance to ensure outdoor light fixtures emitting light into the night sky do not result in a detrimental effect on astronomical research and to ensure reflected glare and light trespass is minimized. SDG&E shall submit a Construction Lighting Mitigation Plan to the CPUC and BLM for review and approval at least 90 days before the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SDG&E shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the CPUC and BLM. The Plan shall include but is not necessarily limited to the following:

- Lighting shall be designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall

be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary;

- All lighting shall be of minimum necessary brightness consistent with worker safety; and
- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.

VIS-3c. Reduce construction impacts to natural features. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits.

VIS-3d. Reduce in-line views of land scars. Construct access or spur roads at appropriate angles from the originating primary travel facilities to minimize extended in-line views of newly graded terrain, when feasible. Contour grading should be used where feasible to better blend graded surfaces with existing terrain. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC and BLM for review and approval at least 60 days prior to the start of construction.

VIS-3e. Reduce visual contrast from unnatural vegetation lines. In those areas where views of land scars are unavoidable, the boundaries of disturbed areas shall be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for ongoing operation, maintenance, or access shall be returned to preconstruction conditions. In those cases where potential public access is opened by construction routes, SDG&E shall create barriers or fences to prevent public access and shall patrol construction routes to prevent vandalized access and litter cleanup until all areas where vegetation was removed are returned to pre-project state. SDG&E shall submit final construction and restoration plans demonstrating compliance with this measure to the CPUC and BLM for review and approval at least 60 days before the start of construction.

VIS-3f. Minimize vegetation removal. Only the minimum amount of vegetation necessary for the construction of structures and facilities will be removed. Topsoil located in areas to be restored shall be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation. Topsoil located in developed or disturbed areas is excluded from this measure.

VIS-3m. Reduce visual impacts resulting from native tree removal. In the event that ornamental or native trees within the project area will be removed due to project design and grading, SDG&E shall prepare a Tree Replacement Plan to be submitted with the Screening/Landscape Plan. The Tree Replacement Plan shall include but is not limited to the following:

- Tree Removal Locations: Indicate the size, type, and location of each tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required.)
- Assessment of the health and structural conditions, soils, tree size (trunk diameter, basal diameter, height, canopy spread), pest and disease presence, and accessibility of native oak trees to be removed due to project design and grading in order to determine whether existing trees can be transplanted outside the project footprint post-construction. If the assessment determines native oak trees can be transplanted, the oaks would be augmented with additional oak plantings in case the larger trees decline and are lost as a result of the relocation process. If native oak trees cannot be transplanted, the Tree Replacement Plan shall indicate the size, type, and location of each proposed replacement tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required).
- Photos of the site and/or trees to be removed.
- Oak replacement plan focusing on oak tree planting with smaller container trees at higher numbers, recommended at least 5:1 with 15-gallon size trees.

The Tree Replacement Plan must minimize mature tree loss to the degree feasible. The Tree Replacement Plan shall be submitted to the CPUC for approval at least 90 days prior to planned tree removal. If the CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, the SDG&E shall prepare and submit the revised Tree Replacement Plan for review and approval.

Land Use

LU-1a. Prepare Construction Notification Plan. Forty-five days prior to construction, SDG&E shall prepare and submit a Construction Notification Plan to the BLM and CPUC for approval. The Plan shall identify the procedures that will be used to inform property owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices,

and include text of proposed public notices and advertisements. The Plan shall address at a minimum two of the following components:

- **Public notice mailer.** A public notice mailer shall be prepared and mailed no less than 15 days prior to construction. The notice shall identify construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties. The notice shall state the type of construction activities that will be conducted and the location and duration of construction, including all helicopter activities. SDG&E shall mail the notice to all residents or property owners within 1,000 feet of project components. If construction delays of more than 7 days occur, an additional notice shall be prepared and distributed.
- **Newspaper advertisements.** Fifteen days prior to construction within a route segment, notices shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins. The notice shall state when and where construction will occur and provide information about the public liaison person and hotline. If construction is delayed for more than 7 days, an additional round of newspaper notices shall be placed to discuss the status and schedule of construction.
- **Public venue notices.** Thirty days prior to construction, notice of construction shall be posted at public venues such as libraries, community notification boards, post offices, rest stops, community centers, and other public venues to inform affected residents of the purpose and schedule of construction activities.
- **Public liaison person and toll-free information hotline.** SDG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbances. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. SDG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.

LU-1b. Notify property owners and provide access. To facilitate access to properties obstructed by construction activities, SDG&E shall notify property owners and

tenants at least 24 hours in advance of construction activities and shall provide alternative access if required.

- LU-2. **Revise project elements to minimize land use conflicts.**** At least 90 days prior to completing final transmission line design for the approved route, SDG&E shall notify landowners of parcels through which the alignment would pass regarding the specific location of the ROW, individual towers, staging areas, access roads, or other facilities associated with the project that would occur on the subject property. The notified parties shall be provided at least 30 days in which to identify conflicts with any planned development on the subject property and to work with SDG&E to identify potential reroutes of the alignment that would be mutually acceptable to SDG&E and the landowner. Property owners whose land may be divided into potentially uneconomic parcels shall be afforded this same opportunity, even if development plans have not been established. SDG&E shall endeavor to accommodate these reroutes only to the extent that they are reasonable and feasible, do not create a substantial increase in cost, and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the alignment as originally planned.

SDG&E shall provide a written report to the CPUC/BLM providing evidence of the notice to landowners and copies of any responses to the notice within 30 days of the notice closing date for responses. SDG&E shall also identify in the documentation submitted to the CPUC and BLM whether reroutes recommended by the landowner or SDG&E can be accommodated. Where they cannot be accommodated, the reasons shall be provided. SDG&E shall provide information sufficient for the CPUC and BLM to determine that the reroute creates no more adverse impact than the originally planned alignment location. SDG&E shall include environmental information consistent with that required for a variance. Where a reroute is proposed, the CPUC or BLM will review and agree to accept or reject individual reroutes. The CPUC or BLM may also recommend compromise reroutes for any of the parcels for which responses were provided in a timely fashion.

Wilderness and Recreation

- WR-1. **Provide notice for access restrictions or anticipated closures to wilderness and recreation areas.**** SDG&E shall coordinate with the County of San Diego to ensure that proper signage is posted in advance for any access restriction and/or

anticipated closures of wilderness and recreation areas (including trails and pathways) so that recreational users may plan accordingly. Signage shall be posted 30 days prior to construction at public venues such as rest stops, resource management offices, and along access routes to known recreational destinations that would be restricted, blocked, or detoured. Notices shall provide information on alternative recreation areas that may be used during the closure of these facilities.

Cultural and Paleontological Resources

CUL-1A. Develop and Implement a Historic Properties Treatment Plan-Cultural Resources Management Plan. A Historic Properties Treatment Plan–Cultural Resources Management Plan (HPTP-CRMP) shall be prepared to avoid or mitigate impacts for significant cultural resources pursuant to Section 106 Guidelines. An MOA shall be developed among all federal, state, and local agencies to implement the HPTP-CRMP. As part of the HPTP-CRMP, recorded cultural resources that can be avoided shall be listed and demarcated during construction as Environmentally Sensitive Areas (ESAs). All recommended NRHP- and/or CRHR-eligible resources that would not be affected by direct impacts, but are within 100 feet of direct impact areas, shall be designated as ESAs. Protective fencing or other markers shall be erected and maintained on SDG&E-owned property, easements, or ROW to protect ESAs from inadvertent trespass for the duration of construction in the vicinity (the ESA fencing should demarcate the limits of the construction areas and where people have to stay within the easement, ROW, or SDG&E-owned property). An archaeologist shall monitor during ground-disturbing activities at all cultural resource ESAs. The HPTP-CRMP shall also define any additional areas that are considered to be of high sensitivity for discovery of buried NRHP-eligible historic properties and CRHR-eligible historic resources, including burials, cremations, or sacred features. These areas of high sensitivity shall also be monitored by qualified archaeologists during construction.

If recommended NRHP-eligible historic properties and CRHR-eligible historic resources are not avoidable, the HPTP-CRMP shall provide a process for evaluating NRHP and CRHR eligibility, consulting with Native Americans about site treatment, working with engineers to avoid resources; suggest various options for reducing adverse effects; and outline a data recovery mitigation plan that would include research design, field sampling, laboratory analysis, reporting, curation, and dissemination of results. Other treatment measures to resolve

adverse effects could include but are not limited to historical documentation, photography, collection and publishing of oral histories, field work to gather information for research purposes or some form of public awareness or interpretation. A description of alternative treatments to resolve adverse effects other than data recovery excavations could also include:

- Relocation of construction component to portions of historic properties that do not contribute to the qualities that make the resource eligible for the NRHP and CRHR;
- Deeding cemetery or other sensitive areas outside of the substation property and related facilities into open space in perpetuity and providing necessary long-term protection measures;
- Public interpretation including the preparation of a public version of the cultural resources studies and/or education materials for local schools;
- Providing Native American tribes future access to traditional and cultural areas on the Project site, but outside of the substation property and related facilities, after completion of Project construction; and
- SDG&E financial support of existing cultural centers for the preparation of interpretive displays.

The HPTP-CRMP shall include provisions for reporting and curation of artifacts and data at a facility that is approved by the agency. The applicant shall attempt to gain permission for artifacts from privately held land to be curated with the other project collections. As part of the HPTP-CRMP, processing of all collected cultural remains shall be described. All artifacts shall be analyzed to identify function and chronology as they relate to the history of the area. Faunal material shall be identified as to species.

A Native American monitor may be required at culturally sensitive locations specified by the lead agency following government-to-government consultation with Native American tribes. The monitoring plan in the CRMP shall indicate the locations where Native American monitors shall be required.

CUL-1B. Avoid and Protect Significant Resources. SDG&E shall design and implement a long-term management plan to protect NRHP-eligible, CRHR-eligible sites or sites treated as eligible for project management purposes from direct impacts of project operation and maintenance and from indirect impacts (such as erosion and

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access) that could result from the presence of the project. The plan shall be developed in consultation with the BLM and other consulting parties to design measures that shall be effective against project maintenance impacts, such as vegetation clearing and road and tower maintenance, and project-related vehicular impacts. The plan shall also include a context for understanding the cultural resources within the ROW and describe how protective measures will be undertaken for the cultural resources within the ROW or main project area that may experience operational and access impacts as a result of the project. Measures considered shall include demarcation of Environmentally Sensitive Areas (ESA's) during any subsequent project construction maintenance activities for all historic properties within 50 feet of direct impact areas, permanent restrictive fencing or gates, permanent access road closures, signage, stabilization of potential erosive areas, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting the resources. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to resources. Monitoring of sites selected during consultation with BLM and CPUC shall be conducted annually by a professional archaeologist for a minimum period of 5 years. Monitoring shall include inspection of all site loci and defined surface features, documented by photographs from fixed photo monitoring stations and written observations. A monitoring report shall be submitted to the BLM and CPUC within 1 month following the annual resource monitoring. The report shall indicate any properties that have been affected by erosion, unauthorized excavation or collecting or vehicle or maintenance impacts. For properties that have been impacted, SDG&E shall provide recommendations for mitigating impacts and for improving protective measures. After 5 years of resource monitoring, the BLM and CPUC shall evaluate the effectiveness of the protective measures and the monitoring program. Based on that evaluation, the BLM and CPUC may require that SDG&E revise or refine the protective measures, or alter the monitoring protocol or schedule. If the BLM does not authorize alteration of the monitoring protocol or schedule, those shall remain in effect for the duration of the project operation.

If annual monitoring program identifies adverse effects to properties eligible for listing on the NRHP and CRHR from operation or long-term presence of the project, or if, at any time, SDG&E, the BLM or CPUC become aware of such adverse effects SDG&E shall notify the BLM and CPUC immediately and shall implement additional protective measures, as directed by the BLM and CPUC. At

the discretion of the BLM and/or CPUC such measures may include, but not be limited to, refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resource studies or protection.

CUL-1C. Training for Contractor. All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. SDG&E shall complete training for all construction personnel and retain documentation showing when training of personnel was completed. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that shall be avoided, and that travel and construction activity shall be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the ROW by SDG&E, its representatives, or employees shall not be allowed. Violators shall be subject to prosecution under the appropriate State and federal laws, and violations shall be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction:

- All construction contracts shall require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources.
- SDG&E shall provide training for supervisory construction personnel describing the potential for exposing cultural resources and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources.

CUL-1D. Construction Monitoring. Prior to issuance of grading permit(s), the SDG&E shall retain a qualified archaeologist, in accordance with the Secretary of the

Interior's Standards and Guidelines (Secretary's Standards) (36 CFR 61), and Native American observer to monitor ground-disturbing activities in culturally sensitive areas in an effort to identify any unknown resources. A qualified archaeologist shall attend preconstruction meetings, as needed, to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring shall be noted on the construction plans.

All construction activities in environmentally sensitive areas, or any other area of the project deemed sensitive for containing cultural resources, shall be monitored by a qualified archaeologist. Since significant portions of the project site contain sedimentary deposits that have the potential to contain buried cultural resources, then full-time cultural resources monitoring shall be implemented during all phases of ground-disturbing work in these areas. If ESA fencing has been established and the possibility of buried cultural deposits is determined to be low after initial ground-disturbance, the on-site professional archaeologist may determine that full-time monitoring is no longer required in that area. A cultural resource monitor shall meet the Secretary of the Interior Standards Qualifications as a professional archaeologist and, as appropriate, shall be on the lead agencies approved consultants list. The archaeological monitor(s) shall also be familiar with the project area and, therefore, be capable of anticipating the types of cultural resources that may be encountered.

CUL-1E. Discovery of Unknown Resources. In the event that previously unknown cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance to allow evaluation of recommended significant cultural resources. The process for handling inadvertent discoveries shall be documented in the CRMP. It shall detail the methods, consultation procedures, and timelines for assessing register eligibility, formulating a mitigation plan, and implementing treatment should avoidance and protection of the resource not be possible. Mitigation and treatment plans for unanticipated discoveries shall be approved by the BLM and SHPO prior to implementation. The archaeologist in coordination with the BLM shall evaluate the significance of the discovered resources based on eligibility for the NRHP, CRHR, or local registers. Preliminary determinations of NRHP eligibility shall be made by the CPUC and BLM, in consultation with other appropriate agencies and local governments, and the SHPO.

- CUL-1F. Control Unauthorized Access.** SDG&E shall coordinate with the authorized officer of the BLM or local landowner/administrator at least 60 days before construction in order to determine if gates shall be installed on access roads, especially trails that would be dually used as access roads, to prevent unauthorized vehicular access to the ROW. Gate installation shall be required at the discretion of the BLM. On trails proposed for dual use as access roads, gates shall be wide enough to allow horses, bicycles, and pedestrians to pass through. SDG&E shall document its coordination efforts with the BLM of the road/trail and provide this documentation to the CPUC and BLM 30 days prior to construction. Signs prohibiting unauthorized use of the access roads shall be posted on the installed gates.
- CUL-1G. Funding of Law Enforcement Patrols.** To control unauthorized use of project access roads and to provide for the general protection of cultural and natural resources made more accessible as a result of the project facilities, SDG&E shall provide funding to BLM and CPUC for law enforcement patrols for the term of the ROW. The BLM and CPUC will formulate what funding is reasonable to implement the above.
- CUL-1H. Continue Consultation with Native Americans and Other Traditional Groups.** SDG&E shall provide assistance to the BLM and CPUC, as requested by the BLM and CPUC, to continue required government to government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994, and Section 106 of the National Historic Preservation Act) and other traditional groups to identify and assess or mitigate the impact of the approved project on traditional cultural properties or other resources of Native American concern, such as sacred sites and landscapes, or areas of traditional plant gathering for food, medicine, basket weaving, or ceremonial uses. As directed by the BLM and CPUC, SDG&E shall undertake required treatments, studies, or other actions that result from such consultation. Actions that are required during or after construction shall be defined, detailed, and scheduled in the HPTP-CRMP and implemented by SDG&E and may include the following:
- Information regarding further developments in the project;
 - Participation by Native American monitors in any additional surveys, archaeological excavations, and ground-disturbing construction activities;

- Return of any prehistoric artifacts requiring repatriation under the NAGPRA that are recovered to the appropriate tribe after they have been analyzed by archaeologists;
- The right to inspect sites where human remains are discovered and to determine the treatment and disposition of the remains; and
- Copies of all site records, survey reports, or other environmental documents.

CUL-2. Human Remains. All location of known Native American human remains shall be avoided through project design and designation as ESAs if within 100 feet of project components. During construction, if human remains are encountered, Native American consultation consistent with NAGPRA shall be undertaken. In addition, if human remains are encountered on non-federal (state, county, or private) lands, California Health and Safety Code §7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code §5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within a reasonable time frame. Subsequently, the Native American Heritage Commission shall identify the “most likely descendant.” The most likely descendant shall then make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code §5097.98. Avoidance and protection of inadvertent discoveries which contain human remains shall be the preferred protection strategy with complete avoidance of impacts to such resources protected from direct project impacts by project redesign. SDG&E shall follow all State and federal laws, statutes, and regulations that govern the treatment of human remains. SDG&E shall comply with and implement all required actions and studies that result from such consultations, as directed by the BLM and CPUC.

PALEO-1A. Inventory and evaluate paleontological resources in the Final APE. Prior to construction, SDG&E shall conduct and submit to the BLM and CPUC for approval an inventory of significant paleontological resources within the affected area, based on field surveys of areas identified as marginal through high or undetermined paleontological sensitivity potential.

PALEO-1B. Develop Paleontological Monitoring and Treatment Plan. Following completion and approval of the paleontological resources inventory and prior to construction, SDG&E shall prepare and submit to the CPUC and BLM for approval a Paleontological Monitoring Treatment Plan (Plan). The Plan shall be designed by a Qualified Paleontologist and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements, including BLM and County of San Diego Paleontological Resource Guidelines. The qualified paleontologist shall have an MA or PhD in paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques. The Plan shall identify construction impact areas of moderate to high sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. The Plan shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sediments determined to have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist). Sediments with zero sensitivity will not require paleontological monitoring. The Qualified Paleontologist shall have a BA in Geology or Paleontology, and a minimum of 1 year of monitoring experience in local sediments. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the applicant on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to, a Paleontological Resources Use Permit (for work on public lands administered by BLM). Notices to proceed shall be issued by the lead agency and other agencies with jurisdiction, following approval of the Paleontological Monitoring and Treatment Plan.

PALEO-1C. Monitor Construction for Paleontology. Based on the paleontological sensitivity assessment and Paleontological Monitoring and Treatment Plan consistent with Mitigation Measure PALEO-01b (Develop Paleontological Monitoring and Treatment Plan), SDG&E shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have moderate (PFYC - Class 3) to high (PFYC - Class 4) paleontological sensitivity within the ECO Substation. Sediments of low, marginal (i.e., PFYC – Class 2), or,

undetermined (PFYC Class 3) sensitivity shall be monitored by a qualified paleontological monitor on a part-time basis (as determined by the Qualified Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Qualified Paleontologist.

PALEO-1D. Conduct Paleontological Data Recovery. If avoidance of significant paleontological resources is not feasible or appropriate based on project design, treatment (including recovery, specimen preparation, data analysis, curation, and reporting) shall be carried out by the project, in accordance with the approved Treatment Plan per Mitigation Measure PALEO-01B (Develop Paleontological Monitoring and Treatment Plan).

PALEO-1E. Train Construction Personnel. Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. The project shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Training shall inform all construction personnel that Environmentally Sensitive Areas include areas determined to be paleontologically sensitive, as defined on the paleontological sensitivity maps for the project, and must be avoided, and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the ROW by the project, its representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate state and federal laws, and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop-work order. The following issues shall be addressed in training or in preparation for construction:

- All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing subsurface paleontological resources, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources.
- The project shall provide a background briefing for supervisory personnel describing the potential for exposing paleontological resources, the location of any potential Environmentally Sensitive Areas, and procedures and

notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils.

- Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted, and the project paleontologist shall be notified. Once the find has been inspected and a preliminary assessment made, the project paleontologist will notify the lead agency and other appropriate land managers and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure PALEO-1B (Develop Paleontological Monitoring and Treatment Plan).

Noise

NOI-1. Blasting Plan. SDG&E will prepare a blasting plan that will reduce impacts associated with construction-related noise and vibrations related to blasting. The blasting plan will be site specific, based on general and exact locations of required blasting and the results of a project-specific geotechnical investigation. The blasting plan will include a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and calculations to determine the area affected by the planned blasting. Noise calculations in the blasting plan will account for blasting activities and all supplemental construction equipment. The final blasting plan and pre-blast survey shall meet the requirements provided below, as well as those outlined in Mitigation Measure HAZ-4b.

The blasting plan will include a schedule to demonstrate, where feasible, construction blasting to occur infrequently enough that it will not exceed the County's impulsive noise standard because blasting would not occur for more than 25% (15 minutes) during a 1-hour period due to the short time duration of a blast. Where this is not possible, other construction blasting would be coordinated with impacted building occupants to occur in their absence, or at other acceptable times, to avoid nuisance or annoyance complaints. If necessary, the applicant will temporarily relocate impacted residents on an as-needed basis for the duration of the blasting activities. The applicant will be responsible for temporary relocation expenses (i.e.; expenses for temporary housing) incurred by impacted residents if relocation is necessary during blasting activities.

To ensure that potentially impacted residents are informed, the applicant will provide notice by mail to all property owners within 300 feet of the project at least 1 week prior to the start of construction activities.

Blasting would be completed between 7 a.m. and 7 p.m. to be compliant with County of San Diego noise ordinances.

A rock anchoring or min-pile system may be used to reduce the risk of damage to structures during blasting activities. Fair compensation for lost use will be provided to the property owner. Physical damage to potentially vulnerable structures will be addressed by avoiding construction blasting near the structures wherever possible, and, if necessary, non-blasting construction methods will be evaluated. If adversely affected, structures shall be restored to an equivalent condition, and fair compensation for lost use will be provided to the owner.

If necessary, the use of portable noise barriers to reduce excessive noise impacts shall be used between the source and affected occupied properties. Noise barriers that break the line of sight would provide 5 dB attenuation. Increasing the height of the barrier would increase the attenuation of the barrier. A 5 dBA to 10 dBA attenuation is considered reasonably feasible.

Supplemental construction equipment, such as drill rigs, may be used to support blasting. At a distance of 80 feet, drill rig noise emissions are approximately 75 dBA L_{eq} . Drill rigs, without mitigation, have the potential to cause temporary noise impacts if used less than 80 feet from the property line of an occupied residence. The blasting plan will include measures to reduce noise impacts resulting from the use of drill rigs at less than 80 feet from a property line. Such measures may include temporary noise barriers or limited hours of operation to reduce the impact to within the County standard.

Transportation and Traffic

TRA-1. Prepare and implement a Traffic Control Plan. At minimum, the plan will include the following:

- SDG&E shall encourage carpooling to the construction site to reduce personal vehicle traffic in the project area to the greatest extent possible.

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- SDG&E will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches.
- Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration.
- Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used.
- All Caltrans' standards for utility encroachments shall be met.
- The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual.
- Clearances or overhead crossings shall conform to regulations of the CPUC and BLM, and the number of crossings shall be minimized.
- New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur.
- For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access rights-of-way (ROWs).
- Utilities shall not be located in median areas.
- Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed.
- Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside of the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways.
- New installations shall not impair sight distances.
- SDG&E shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts.

- SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness.

SDG&E shall provide a draft copy of the Traffic Control Plan to the agencies listed for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E, and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be submitted to the CPUC and BLM with input from commenting agencies and provided to SDG&E for implementation during all construction activities.

TRA-2. Repair roadways damaged by construction activities. If damage to roads occurs, SDG&E shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired at SDG&E's cost. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.

Public Health and Safety

HAZ-1a. Hazardous Materials Management Plan. Prior to approval of final construction plans, SDG&E shall prepare an HMMP for the construction phase of the project, which shall be reviewed and approved by the appropriate agency, and shall include the following components:

- The plan shall identify all hazardous materials that will be present on any portion of the construction site, including, but not limited to, fuels, solvents, and petroleum products. The plan shall address storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site. The plan shall establish inspection procedures, storage requirements, storage

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quantity limits, inventory control, nonhazardous product substitutes, and disposition of excess materials.

- The plan shall identify secondary containment and spill prevention countermeasures, as well as a contingency plan to identify potential spill hazards, how to prevent their occurrence, and responses for different quantities of spills that may occur. Secondary containment and countermeasures shall be in place throughout construction so that if any leaks or spills occur, responses will be made immediately.
- The plan shall identify materials (and their locations) that will be on site and readily accessible to clean up small spills (i.e., spill kit, absorbent pads, and shovels). Such emergency spill supplies and equipment shall be clearly marked and located adjacent to all areas of work and in construction staging areas. The plan shall identify the spill-response materials that must be maintained in vehicles and substation sites during construction and procedures for notification to the appropriate authorities.
- The plan shall identify adequate safety and fire suppression devices for construction-related activities involving toxic, flammable, or explosive materials (including refueling construction vehicles and equipment). Such devices shall be readily accessible on the project site, as specified by the County's Fire Department and per the Uniform Building Code and Uniform Fire Code. The plan shall be included as part of all contractor specifications and final construction plans to the satisfaction of the appropriate agency. The plan shall also identify requirements for notices to federal and local emergency response authorities and shall include emergency response plans.

Prior to construction, all contractor and subcontractor personnel shall receive training regarding the components of the HMMP, as well as applicable environmental laws and regulations related to hazardous materials handling, storage, and spill prevention and response measures.

SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities. The plan shall be submitted to BLM and CPUC at least 30 days prior to construction.

HAZ-1b. Health and Safety Program. Prior to approval of final construction plans, SDG&E shall prepare a Health and Safety Program for each applicable phase of

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the project (i.e., construction, operation, and decommissioning). The program shall be developed to protect both workers and the general public during all phases of the project. The program shall be implemented to educate construction workers about the hazards associated with the particular project site and the safety measures that must be taken to prevent injury. The program shall include standards regarding occupational safety, safe work practices for each task, hazard training requirements for workers, and mechanisms for documentation and reporting.

Regarding occupational health and safety, the program should identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; OSHA standard practices for safe use of explosives and blasting agents; and measures for reducing occupational EMF exposures); establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards). The program should include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. The program should include worker training regarding how to identify potentially contaminated soils and/or groundwater. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies shall be established.

The program should identify requirements for temporary fencing around staging areas, storage yards, and excavation areas during construction or decommissioning activities. Such fencing should be designed to restrict transient traffic, off-highway vehicle (OHV) use, and the general public from accessing areas under construction and should be removed once construction or decommissioning activities are complete. The program should also identify appropriate measures to be taken during operation of the project to limit public access to hazardous facilities (e.g., permanent fencing, locked access). In order to inform workers and the general public of the dangers of abandoned mines, pamphlets with the “Stay Out-Stay Alive” information used by federal and state governments should be distributed as part of the program.

SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the program for all construction activities. The program shall be submitted to BLM and CPUC at least 30 days

prior to construction. In addition, SDG&E shall implement Sempra Energy's Health and Safety Program during the operational phase of the project.

- HAZ-1c. Waste Management Plan.** Prior to approval of final construction plans, SDG&E shall prepare a Waste Management Plan, which shall determine waste procedures, waste storage locations, waste-specific management and disposal requirements, inspection procedures, and waste minimization procedures.

SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities. The plan shall be submitted to CPUC and BLM at least 30 days prior to construction.

- HAZ-2b. Contingency plan for encountering contaminated soils.** If soil or groundwater contamination is suspected or encountered during grading or excavation activities (e.g., unusual soil discoloration or strong odor), SDG&E's contractors or subcontractors shall immediately stop work and notify the designated environmental field representative. All work in the area of suspected contamination shall cease, the work area shall be cordoned off, and the environmental field representative shall implement appropriate health and safety procedures. Work outside the suspected area may continue as determined by the environmental field representative.

Preliminary samples of the soil, groundwater, or suspected material shall be taken by OSHA-trained individuals and sent to a California Certified Laboratory for characterization. If the sample testing determines that contamination is not present, work shall continue at the previously suspected site. If contamination is found above regulatory limits, however, the appropriate regulatory agency (e.g., RWQCB or Certified Unified Program Agency (CUPA)) responsible for responding to and providing environmental oversight of the region shall be notified in accordance with state or local regulations. In addition, SDG&E shall contact the appropriate regulatory agencies for the State of California (e.g., DTSC or RWQCB) and the County to plan options for handling, treating, and/or disposing of materials.

Documentation of the suspected contamination shall be made in the form of a report, identifying the location and potential contamination, as well as the process used for sampling. Results of laboratory testing and recommended resolutions for

handling and excavating materials found to exceed regulatory requirements shall be submitted to the BLM and CPUC for review and approval.

- HAZ-3. Soil testing for lead contamination.** Soil samples shall be collected and tested from all excavation sites within 500 feet of any area identified as a current or historical shooting range to determine the presence of lead and extent of any contamination. The sampling and testing shall be conducted by a California licensed professional and sent to a California Certified Laboratory. A report documenting the areas proposed for sampling and the process used for sampling and testing shall be submitted to the project's lead agency for review and approval at least 60 days prior to excavation. Results of the laboratory testing and recommended resolutions for handling and excavating any materials found to exceed regulatory requirements shall be submitted to the project's lead agency 30 days prior to excavation.

In addition, a Soil/Lead Contamination Handling Plan shall be prepared to address appropriate procedures in the event that lead contamination is discovered as a result of soil testing. This plan shall contain provisions for a lead-awareness program for workers, as well as guidelines for the identification, removal, transport, and disposal of lead-impacted materials. This plan shall also emphasize that all activities within, or in close proximity to, contaminated areas must follow applicable environmental and hazardous waste laws and regulations. This plan shall be submitted to the project's lead agency 30 days prior to excavation.

Documentation of any confirmed or suspected contamination identified during testing or excavation shall be made in the form of a report identifying the location and potential contamination, as well as the process used for sampling. Results of laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to the CPUC and BLM for review and approval. (SDG&E to verify whether applicable as part of the Mitigation Monitoring, Compliance, and Report Plan notice to proceed process.)

- HAZ-4a. Safety Assessment.** Prior to commencing construction activities, SDG&E shall conduct a safety assessment to describe potential safety issues associated with the project, how safety prevention measures would be implemented, where medical aid kits would be located, the appropriate response action for each safety hazard, and procedures for notifying the appropriate authorities. The assessment shall address issues such as site access, construction hazards, safe work practices,

security, heavy equipment transportation, traffic management, emergency procedures, and fire control.

HAZ-4b. Blasting Plan. If blasting is deemed necessary for the construction of project components, SDG&E shall conduct a pre-blast survey and prepare a blasting plan. A written report of the pre-blast survey and final blasting plan shall be provided to the appropriate regulatory agency and approved prior to any rock removal using explosives. In addition to any other requirements established by the appropriate regulatory agencies, the pre-blast survey and blasting plan shall meet the following conditions, as well as those outlined in Mitigation Measure NOI-1:

The pre-blast survey shall be conducted for structures within a minimum radius of 1,000 feet from the identified blast site to be specified by SDG&E. Sensitive receptors that could reasonably be affected by blasting shall be surveyed as part of the pre-blast survey. Notification that blasting would occur shall be provided to all owners of the identified structures to be surveyed prior to commencement of blasting. The pre-blast survey shall be included in the final blasting plan.

The final blasting plan shall address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement, including provisions to monitor and assess compliance with the air-blast, ground vibration, and peak particle velocity requirements. The blasting plan shall meet criteria established in Chapter 3 (Control of Adverse Effects) in the Blasting Guidance Manual of the U.S. Department of Interior Office of Surface Mining Reclamation and Enforcement.

The blasting plan shall outline the anticipated blasting procedures for the removal of rock material at the proposed turbine foundation locations. The blasting procedures shall incorporate line control to full depth and controlled blasting techniques to create minimum breakage outside the line control and maximum rock fragmentation within the target area. Prior to blasting, all applicable regulatory measures shall be met. SDG&E, its general contractor, or its subcontractor (as appropriate) shall keep a record of each blast for at least 1 year from the date of the last blast.

PS-2. Determine proper grounding procedures and implement appropriate grounding measures. As part of the project siting and construction process, SDG&E's contractor(s) shall identify objects (such as fences, conductors, and pipelines) that have the potential for induced voltages and work with the

affected parties to determine proper grounding procedures (Note: CPUC General Order 95 and the NESC do not have specific requirements for grounding). SDG&E shall install all necessary grounding measures prior to energizing the line. At least 30 days prior to energizing the line, SDG&E shall notify in writing all property owners within and adjacent to the project's ROW regarding the date the line is to be energized, subject to the review and approval of the appropriate regulatory agency.

The written notice shall provide a contact person and telephone number for answering questions regarding the line and guidelines on what activities should be limited or restricted within the ROW. The written notice shall describe the nature and operation of the line, and SDG&E's responsibilities with respect to grounding all conducting objects. In addition, the notice shall describe the property owner's responsibilities with respect to notification for any new objects that may require grounding and guidelines for maintaining the safety of the ROW.

SDG&E shall respond to and document all complaints received and the responsive action taken. These records shall be made available to the appropriate regulatory agency for review upon request. SDG&E shall refer all unresolved disputes to the approving agency for resolution.

Air Quality

AQ-1. The following measures shall be incorporated to reduce fugitive dust and other criteria pollutant emissions during construction activities:

- Rock aprons or rattle plates will be installed as needed at the intersection of dirt access roads and paved public roadways to clean the tires of equipment prior to leaving the site.
- All active construction areas, unpaved access roads, parking areas, and staging areas will be watered or stabilized with nontoxic soil stabilizers as needed to control fugitive dust.
- All public streets will be swept or cleaned with mechanical sweepers if visible soil material is carried onto them by construction activities or vehicles.
- Exposed stockpiles (e.g., dirt, sand, etc.) will be covered and/or watered or stabilized with nontoxic soil binders as needed to control emissions.

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- Trucks transporting bulk materials will be completely covered unless 2 feet of freeboard space from the top of the container is maintained with no spillage and loss of material. In addition, the cargo compartment of all haul trucks will be cleaned and/or washed at the delivery site after removal of the bulk material.
- Movement of bulk material handling or transfer will be stabilized prior to handling or at a point of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line.
- Traffic speeds on unpaved roads and the ROW will be limited to 15 miles per hour.
- Vehicle idling time will be limited to a maximum of 5 minutes for vehicles and construction equipment, except where idling is required for the equipment to perform its task.
- Road graders used during site development activities will be equipped with a CARB-verified Level 2 diesel emission control strategy or a comparable diesel-control technology that will reduce inhalable particulate matter (PM₁₀) emissions by 50% or more.
- If suitable park-and-ride facilities are available in the project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the project's construction schedule.
- All off-road, diesel-powered construction equipment will be kept in good tune and maintained according to the manufacturer's specifications.
- Construction equipment will use electric-powered motors where feasible.
- The construction contractor will prepare and implement a high-wind dust control plan and terminate soil disturbance when winds exceed 25 miles per hour.
- The construction contractor will require 90-day, low-NO_x tune-ups for off-road equipment.
- Diesel particulate filters will be utilized on heavy equipment where feasible.

- Construction activities will comply with all applicable SDAPCD rules and regulations.

AQ-2. All off-road diesel engines with a rated output of greater than 50 horsepower will, at a minimum, meet the Tier 2 California Emissions Standards for Off-Road Compression Ignition Engines. If reasonably available, Tier 3 engines will be employed. SDG&E shall provide verification that the construction fleet meets the requirements identified as part of this mitigation measure.

Water Resources

HYD-1. **A Stormwater Pollution Prevention Plan shall be prepared to reduce soil erosion during construction.** In compliance with the new SWRCB's NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, effective July 1, 2010), SDG&E shall prepare a project-specific SWPPP before construction begins, and it shall be kept on site throughout the construction process. The SWPPP shall include the following:

- Identification of pollutant sources and non-stormwater discharges associated with construction activity.
- Specifications for BMPs that shall be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, pull sites, and helicopter landing zones. Specifications shall include:
 - A plan for training construction crews
 - A plan for monitoring and inspecting BMPs and site conditions
 - A plan for sampling and analysis of pollutants (as necessary).
- Where applicable, the following shall apply:
 - Construction impacts shall be minimized to the greatest extent possible
 - Upon completion of construction phases, roadways shall be reduced to minimum widths needed
 - Areas disturbed during construction shall be revegetated to their natural states

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- Construction roadways shall follow natural contours to the extent practical and be designed to minimize stream crossings, avoid wetlands, and maintain surface water runoff patterns to prevent erosion
 - CDFG guidelines for culverts shall be followed to minimize long-term maintenance and meet a 10-year rain event to minimize trapping of sediment.
- Where applicable, the following shall apply to reduce the release of contaminants to the local surface and groundwater:
 - For on-site storm drain inlets, mark all inlets with the words “No Dumping! Flows to Sensitive Habitat” or similar.
 - For landscaping, show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. Show self-retaining landscape, if any. State that final landscape plans will preserve existing native trees, shrubs, and ground cover will cover maximum extent possible.
 - Design landscaping to minimize irrigation, runoff, and use of pesticides and fertilizers that contribute to stormwater pollution. Select plants that are appropriate for site soils, slopes, climate, wind, sun, rain, land use, ecological consistency, and plant interactions.
 - For outdoor storage of equipment or materials, show storage areas and how they will be covered and what structural features or grading will be incorporated to prevent pollutants from discharging from the site.
 - Designate areas for vehicle/equipment repair, maintenance, and cleaning, and document how these areas will be contained to prevent pollutant runoff.
 - For leaking or failure of large power transformers, have 100% containment at each power transformer.

HYD-2. Avoidance and preventative measures to protect local groundwater during excavation. Prior to excavation, a qualified geologist/hydrologist shall determine the depth of groundwater in areas where excavation would occur. The project shall be designed to avoid areas of shallow groundwater where feasible. In such areas where groundwater cannot be avoided during excavation, the site shall be

dewatered during construction, and materials that could contaminate the groundwater shall be kept at least 200 feet from the dewatering activities. An NPDES permit shall be obtained for proper disposal of water. Treatment may be required prior to discharge.

HYD-3. Identification of sufficient water supply. Prior to construction SDG&E will prepare comprehensive documentation that identifies one or more confirmed, reliable water sources that when combined meet the project's full water supply construction needs. Documentation will consist of the following:

- *Preparation of a groundwater study.* For well water that is to be used, the applicant will commission a groundwater study by a qualified hydrogeologist to assess the existing condition of the underlying groundwater/aquifer and all existing wells (with owner's permission) in the vicinity of proposed well location/water sources. The groundwater study will evaluate aquifer properties and aquifer storage. The groundwater study will estimate short and long-term well water supplies from each well proposed to be used, and documentation indicating that each well is capable of producing the total amount of water to be supplied for construction from each well. The groundwater study will estimate short- and long-term impacts of the use of the well(s) on the local groundwater production (short-term extraction for construction water and ongoing O&M water), on all project wells, and on other wells in the project area. The groundwater study will include an assessment of the potential for subsidence brought on by project-related water use in the area. The applicant will provide demonstration of compliance with all applicable laws and regulations and will obtain a County of San Diego Major Use Permit for use of any proposed well prior to construction.
- *Documentation of Purchased Water Source(s).* For water that is to be purchased from one or more water/utility district(s), the applicant shall provide written documentation from such district(s) indicating the total amount of water to be provided and the time frame that the water will be made available to the project. The Sweetwater Authority has provided written confirmation of water availability to support the project.

Total confirmed water supplies from the combination of above documented sources shall equal the total gallons of water needed through construction of the project.

HYD-5. Implementation of creek-crossing procedures. Where creek crossings can be completed during dry season, with no flows present in the creek, seasonally timed restorative open trenching will be completed. This procedure will use minimum trench widths. Trench cut material will not be placed outside of the creek bed and outside of 100-year inundated areas. Trench fill will be compacted and replaced to existing conditions, including matching existing creek bed gradations, and restoring vegetation. Open trenching restoration will be completed prior to any wet season flows, and will include anti-erosion action plans for any unplanned rainfall during construction. The applicant shall obtain all required permits prior to completing open trenching through drainages. In any case, flows will be isolated from open trenching by best management practices mandated by the General Construction Permit. Areas of trenching would be restored and/or vegetated at completion of work. Where creek crossing cannot be completed during the dry season creek crossing shall use jack-and-bore procedures to avoid direct impacts and shall be conducted in a manner that does not result in sediment-laden discharge or hazardous materials release to the water body. The following measures shall be implemented during horizontal boring (jack-and-bore) operations:

- (1) Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages.
- (2) Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention).
- (3) Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, and drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times.
- (4) Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion, and temporary sediment barriers shall be left in place until restoration is deemed successful.

The applicant shall obtain the required permits prior to conducting creek crossing work. Required permits may include ACOE CWA Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement 1602. The applicant shall implement all pre- and post-construction conditions identified in the permits issued. The plan shall be submitted to the CPUC, County of San Diego, and ACOE 60 days prior to construction.

HYD-6. Horizontal Directional Drill Contingency Plan. If horizontal directional drilling is to be used during construction SDG&E shall prepare a Horizontal Directional Drill Contingency Plan to address procedures for containing an inadvertent release of drilling fluid (frac-out). The plan shall contain specific measures for monitoring frac-outs, for containing drilling mud, and for notifying agency personnel. The plan shall also discuss spoil stockpile management, hazardous materials storage and spill cleanup, site-specific erosion and sediment control, and housekeeping procedures, as described in the SWPPP. The plan shall be submitted to the CPUC, BLM, and ACOE 60 days prior to construction.

SDG&E shall obtain the required permits prior to conducting work associated with horizontal directional drilling activities. Required permits may include U.S. Army Corps of Engineers Clean Water Act Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement Section 1602. SDG&E shall implement all pre- and post-construction conditions identified in the permits issued for the horizontal directional drilling.

HYD-7. Bury power line below 100-year scour depth. At locations where the buried power line is to be at or adjacent to a streambed capable of scour, the power line shall be located below the expected depth of scour from a 100-year flood, or otherwise protected from exposure by scour that, for purposes of this mitigation measure, also includes lateral (stream bank) erosion and potential scour associated with flows overtopping or bypassing a culvert or bridge crossing. During final design, a registered civil engineer with expertise in hydrology, hydraulics, and river mechanics shall make a determination of where the underground line could be at risk of exposure through scour or erosion from a 100-year event.

Geology, Mineral Resources, and Soils

- GEO-1. Erosion Control and Sediment Transport Control Plan.** The Erosion Control and Sediment Transport Control Plan would be included with the project grading plans submitted to the County for review and comment. The plan would be submitted to CPUC and BLM a minimum of 60 days prior to project design and would be prepared in accordance with the standards provided in the Manual of Erosion and Sedimentation Control Measures and consistent with practices recommended by the Resource Conservation District of Greater San Diego County. Implementation of the plan would help stabilize soil in graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be implemented during construction activities. Erosion control efforts, such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (e.g., flagging), vehicle mats in wet areas, and retention/settlement ponds, would be installed before extensive soil clearing and grading begins. Appropriate stabilization measures, such as mulching or seeding, would be used to protect exposed areas during construction activities. Revegetation plans, the design and location of retention ponds, and grading plans would be submitted to the CDFG and ACOE for review in the event of construction near waterways. In disturbed areas where construction equipment has caused compaction of soils (e.g., staging areas, structure sites, temporary spur roads, etc.), soils would be decompacted as necessary prior to seeding, and reclamation would occur to enhance revegetation and reduce potential for erosion.
- GEO-2. Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.** The design-level geotechnical studies to be performed by SDG&E shall identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures shall be utilized for protection of reinforcement, concrete, and metal-structural components against corrosion, including use of corrosion-resistant materials and coatings, increased thickness of project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Studies shall conform to industry standards of care and ASTM

standards for field and laboratory testing. Design shall conform to applicable sections of the County of San Diego grading codes, CBC, and the standard specifications for public works construction. The geotechnical studies prepared by a certified geologist shall be submitted to CPUC and BLM 60 days prior to construction of proposed structures.

GEO-3. Conduct geotechnical investigations. The applicant shall perform design-level geotechnical investigations to evaluate the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures that meet CBC and IEEE design parameters shall be incorporated into the project designs. Appropriate measures for project facilities could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures. The geotechnical investigations prepared by a certified geologist shall be submitted to CPUC and BLM 60 days prior to construction of proposed structures.

GEO-4. Facilities inspections conducted following major seismic event. If large levels of ground shaking (such as Modified Mercalli Intensity VI or greater) are experienced or a major earthquake (magnitude 6.0 and above) occurs along the Elsinore Fault, a professional licensed geologist, geotechnical engineer, and structural engineer hired by SDG&E shall perform facilities inspections as quickly as possible. Careful examination shall be conducted of all project facilities. Any required repair or needed improvements shall be implemented as soon as feasible to ensure that the integrity of project facilities has not been compromised.

Public Services and Utilities

PSU-1a. Notification of utility service interruption. Prior to construction in which a utility service interruption is known to be unavoidable, SDG&E shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the applicable lead agency.

PSU-1b. Protect underground utilities. Prior to construction of the transmission/gen-tie line, SDG&E shall submit to the CPUC and BLM written documentation, including evidence of review by the appropriate jurisdictions, including the following:

- Construction plans designed to protect existing utilities and that show the dimensions and location of the finalized alignment
- Records that the applicant provided the plans to affected jurisdiction for review, revision, and final approval
- Evidence that the project meets all necessary local requirements
- Evidence of compliance with design standards
- Copies of necessary permits, agreements, or conditions of approval
- Records of discretionary decisions made by the appropriate agencies.

PSU-1c. Coordinate with utility providers. SDG&E shall coordinate with all applicable utility providers with facilities located within or adjacent to the project to ensure that design does not conflict with other facilities prior to construction. In the event of a conflict, the project will be aligned vertically and/or horizontally as appropriate to avoid other utilities and provide adequate operational and safety buffering. Alternately, the other existing facilities may be relocated. Long-term operations and maintenance of the project will be negotiated through easement, purchased ROW, franchise agreement, or joint use agreement.

Fire and Fuels Management

FF-1. Develop and implement a Construction Fire Prevention/Protection Plan. San Diego Gas & Electric Company (SDG&E) shall develop a multiagency Construction Fire Prevention/Protection Plan in consultation with the California Department of Forestry and Fire Protection (CAL FIRE), San Diego Rural Fire Protection District (SDRFPD), and San Diego County Fire Authority (SDCFA) to the satisfaction of the CPUC. SDG&E shall monitor construction activities to ensure implementation and effectiveness of the plan. The final plan will be approved by the CPUC prior to the initiation of construction activities and shall be implemented during all construction activities by SDG&E. At minimum, the plan will include the following:

- Procedures for minimizing potential ignition

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- vegetation clearing
 - fuel modification establishment
 - parking requirements
 - smoking restrictions
 - hot work restrictions
- Red Flag Warning restrictions
- Fire coordinator role and responsibility
- Fire suppression equipment on site at all times work is occurring
- Requirements of Title 14 of the California Code of Regulations (CCR), Article 8 #918 “Fire Protection” for private land portions
- Access road widening (28-foot County roads, 18-foot-wide spur roads)
- Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009)
- Emergency response and reporting procedures
- Emergency contact information
- Worker education materials; kick-off and tailgate meeting schedules
- Other information as provided by CAL FIRE, SDRFPD, SDCFA, CPUC, and Bureau of Land Management (BLM).

Additional restrictions will include the following:

- During the construction phase of the project, SDG&E shall implement ongoing fire patrols. SDG&E shall maintain fire patrols during construction hours and for 1 hour after end of daily construction, and hotwork
- Fire Suppression Resource Inventory – In addition to 14 CCR 918.1(a), (b), and (c), SDG&E shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the CAL FIRE, SDRFPD, and SDCFA.
- During Red Flag Warning events, as issued daily by the National Weather Service in state responsibility areas (SRAs) and local responsibility areas (LRA), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under Hot Work Procedure.

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- SDG&E and contractor personnel shall be informed of changes to the Red Flag event status and PAL as stipulated by CAL FIRE and CNF.
- All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area immediately upon ignition.
- Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crewmembers as-needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect.
- Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100 feet of a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Prevention/Protection Plan.

SDG&E will provide a draft copy of the Construction Fire Prevention/Protection Plan to the CAL FIRE, SDRFPD, and SDCFA for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E and revisions to the plan will address each comment to the satisfaction of the CPUC. The final plan will be approved by the CPUC with input from CAL FIRE, SDRFPD, SDCFA, and BLM, as desired, prior to the initiation of construction activities and provided to SDG&E for implementation during all construction prior to the initiation of construction activities. All construction work on the ECO Substation Project shall follow the Construction Fire Prevention/Protection Plan guidelines and commitments.

FF-2. Revise the Wildland Fire Prevention and Fire Safety Electric Standard Practice Plan (2009) to Create the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational Maintenance Plan. The revised plan

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will address the ECO Substation Project and will be implemented during all operational maintenance work associated with the project for the life of the project. Important fire safety concepts that will be included in this document are as follows:

- Implement existing practices including Electric Standard Practice 113.1, Maintenance of existing Remote Automated Weather Stations and territory-wide weather system monitoring, adjusted system reclosing policies (patrols), replacement of wood poles with steel in priority areas, and additional measures as may be developed, participation in San Diego County FireSafe Council and other public outreach.
- Guidance on where maintenance activities may occur (non-vegetated areas, cleared access roads, and work pads that are approved as part of the project design plans) Fuel modification buffers required by the Fire Protection Plan (FPP)
- When vegetation work will occur (prior to any other work activity)
- Timing of vegetation clearance work to reduce likelihood of ignition and or fire spread
- Coordination procedures with fire authority
- Integration of the project's Construction Fire Prevention/Protection Plan content
- Personnel training and fire suppression equipment
- Fire safety coordinator role as manager of fire prevention and protection procedures, coordinator with fire authority and educator
- Communication protocols
- Incorporation of CAL FIRE, San Diego Rural Fire Protection District (SDRFPD), and SDCFA reviewed and approved Response Plan mapping and assessment
- Other information as provided by CAL FIRE, SDRFPD, SDCFA, BLM, and CPUC.

SDG&E will provide a draft copy of the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational; Maintenance Plan to CAL FIRE, SDRFPD, SDCFA, BLM, and CPUC for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to

SDG&E and plan revisions will address each comment to the satisfaction of the CPUC. The final plan will be approved by the CPUC prior to energizing the project and provided to SDG&E for implementation during all operational maintenance activities.

- FF-3. Provide Assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA).** Provide assistance to SDRFPD and SDCFA to improve the response and firefighting effectiveness near electrical substations, transmission lines, and aerial infrastructure based on project risk and fire protection needs. Assistance by SDG&E shall include providing funding for one SDCFA Fire Code Specialist II position to enforce existing fire code requirements, including but not limited to implementing required fuel management requirements (e.g., defensible space), in priority areas to be identified by the SDCFA for the life of the project. All fuel management activities shall be in accordance with CEQA Guidelines Section 15304 (i), which indicates that the minor land alternation activities will not have a significant effect on the environment, as the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. In addition, SDG&E is to provide funding to allow SDCFA to employ up to four volunteer/reserve firefighters as part-time code inspectors on a stipend basis for up to 90 days per year for the life of the project. The funding for the SDCFA Fire Code Specialist II position and the four volunteer/reserve firefighters as part-time code inspectors will be provided through proportional contributions, to be determined by CPUC and BLM, from SDG&E (and the other applicants) to the SDCFA prior to construction.

A fixed annual fire mitigation fee of approximately \$116,600 will be provided by SDG&E to SDRFPD for mitigation funding. The funding will be utilized to assist with the purchase and maintenance of a Type I engine with an aqueous film forming foam (AFF) apparatus with a deck gun to apply a heavy stream. In addition, the funding will be utilized to provide for a third volunteer stipend to staff the engine with firefighters and training for electrical firefighting for 10 personnel (2 per year on a 5-year rotation). The fire mitigation fee will be paid annually during the life of the project and terminated upon decommissioning of the substation and related facilities.

FF-4. Customized Fire Protection Plan for Project. A draft Fire Protection Plan (FPP) will be submitted to CAL FIRE, SDRFPD, and SDCFA at least 90 days before the start of any construction activities. Comment on the draft FPP shall be provided to SDG&E and SDG&E shall resolve each comment in consultation with each responsible agency. The final FPP shall be approved by the CPUC prior to the initiation of construction activities. The FPP will include, at minimum, the following:

- San Diego County FPP Content Requirements (<http://www.sdcountry.ca.gov/dplu/docs/Fire-Report-Format.pdf>)
- Rural Fire Protection District Content Requirements
 - Provisions for fire safety and prevention
 - Water supply
 - Fire suppression/detection systems – built-in detection system with notification
 - Secondary containment
 - Site security and access
 - Emergency shut-down provisions
- Integration into plans prepared to satisfy Mitigation Measures FF-1 and FF-2.

The FPP will be incorporated into MM FF-1, the Construction Fire Prevention/Protection Plan, and MM FF-2, the Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009)¹ Operational Maintenance Plan. The Customized Fire Protection Plan will incorporate clarifications and additional ECO Substation Project APMs described in Section B of this EIR/EIS.

FF-6. Funding for FireSafe Council. Provide funding for Boulevard/Jacumba/La Posta FireSafe Council with a clarified focus of coordinating a Community Wildfire Protection Plan (CWPP) and Evacuation Plan. Funding for the Boulevard/Jacumba/La Posta FireSafe Council will enable this newly formed organization a means to proactively complete these plans, provisions for applying for grant funding, and ultimately, for implementing fuel reduction and evacuation

¹http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/Attach%204_07-B%20Wildland%20Fire%20Prevention%20and%20Safety%20Practice.pdf.

plans. Funding will be a lump sum, one-time amount with SDG&E providing fair share of CWPP and Evacuation Plan preparation.

FF-7. Preparation of Disturbed Area Revegetation Plan. All areas disturbed during construction activities that will not be continuously included in the long-term maintenance access right-of-way (ROW) will be provided native plant restoration in order to prevent non-native, weedy plants from establishing. Disturbed areas that will be included in the long-term maintenance program will not be revegetated as any plants that establish in these areas will be removed on an ongoing (at least annual) basis.

Mitigation Measure FF-7 corresponds with Mitigation Measure Bio-1d and is not a duplicative plan but will be implemented under the biological monitoring program. It directs that the temporary disturbance areas will be revegetated with native plants common to the area through direction detailed in a Habitat Restoration Plan. The Habitat Restoration Plan will be prepared to restore native habitat and to reduce the potential for non-native plant establishment. The restoration plan will incorporate a Noxious Weeds and Invasive Species Control Plan to assist in restoring the construction area to the prior vegetated state and lessen the possibility of establishment of non-native, flammable plant species. A copy of the Revegetation Plan will be provided to the CPUC and BLM.

APPLICANT PROPOSED MEASURES

The following APMs were proposed by SDG&E in its August 2009 Proponent's Environmental Assessment submitted to the California Public Utilities Commission (CPUC). The impact analysis for the 138 kV transmission line assumes that all APMs defined in the following table would be implemented.

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Table 2. APMs Proposed by SDG&E

APM No.	Description
Aesthetics/Visual Resources	
ECO-AES-04	Construction activities will be kept as clean and inconspicuous as possible. Where practical, construction storage and staging will be screened with opaque fencing from close-range residential views.
Air Quality	
ECO-AIR-01	Rock aprons or rattle plates will be installed, as needed, at the intersection of dirt access roads and paved public roadways to clean the tires of equipment prior to leaving the site.
ECO-AIR-02	All active construction areas, unpaved access roads, parking areas, and staging areas will be watered or stabilized with non-toxic soil stabilizers as needed to control fugitive dust.
ECO-AIR-03	All public streets will be swept or cleaned with mechanical sweepers if visible soil material is carried onto them by construction activities or vehicles.
ECO-AIR-04	Exposed stockpiles (e. g., dirt, sand, etc.) will be covered and/or watered or stabilized with non-toxic soil binders as needed to control emissions.
ECO-AIR-05	Trucks transporting bulk materials will be completely covered unless two feet of freeboard space from the top of the container is maintained with no spillage and loss of material. In addition, the cargo compartment of all haul trucks will be cleaned and/or washed at the delivery site after removal of the bulk material.
ECO-AIR-06	Movement of bulk material handling or transfer will be stabilized prior to handling or at a point of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line.
ECO-AIR-07	Traffic speeds on unpaved roads and the ROW will be limited to 15 miles per hour (mph).
ECO-AIR-08	SDG&E will limit actively graded areas to a cumulative total of 12.8 acres per day. The total area of disturbance can exceed this acreage so long as the actively graded portion is below this threshold.
ECO-AIR-09	Vehicle idling time will be limited to a maximum of five minutes for vehicles and construction equipment, except where idling is required for the equipment to perform its task.
ECO-AIR-10	Road graders used during site development activities at the ECO Substation will be equipped with a California Air Resources Board-verified Level 2 diesel emission control strategy or a comparable diesel-control technology that will reduce inhalable particulate matter (PM10) emissions by 50 percent or more.
ECO-AIR-11	If suitable park-and-ride facilities are available in the Project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the Project's construction schedule.
Biological Resources	
ECO-BIO-01	Littering will not be allowed. Food-related garbage and trash will be removed from the Project area daily.
ECO-BIO-02	Smoking will only be allowed in cleared areas or in enclosed vehicles to reduce the potential for wildfires.
ECO-BIO-03	All earth-moving equipment will be confirmed to be clean and free of mud and vegetative material before first arriving at the construction site. If the equipment leaves the Project site, it must be confirmed to be clean and free of mud and vegetative material prior to re-entering the site.
ECO-BIO-04	Firearms will be prohibited in all Project areas.
ECO-BIO-05	Project personnel will not be allowed to bring pets to any Project area to minimize harassment or killing of wildlife and to prevent the introduction of destructive animal diseases to native wildlife populations.
ECO-BIO-06	No harm, harassment, or collection of plant and wildlife species will be allowed. Feeding of wildlife will be prohibited.
ECO-BIO-07	A biological monitor will be present during all ground-disturbing and vegetation removal activities. Immediately prior to initial ground-disturbing activities and/or vegetation removal, the biological monitor will

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APM No.	Description
	survey the site to ensure that no sensitive species will be impacted.
ECO-BIO-08	Prior to construction, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including appropriate wildlife avoidance; impact minimization procedures; the importance of these resources, and the purpose and necessity of protecting them; and methods for protecting sensitive ecological resources. The training will include BMPs to reduce the potential for erosion and sedimentation during construction of the Project.
ECO-BIO-09	Survey personnel will keep survey vehicles on existing roads. During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat will require prior approval from the Project biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.
ECO-BIO-10	Except when not feasible due to physical or safety constraints, all Project vehicle movement will be restricted to existing access roads and access roads constructed as a part of the Project and determined and marked by SDG&E in advance of construction. Approval from a biological monitor will be obtained prior to any travel off of existing access roads.
ECO-BIO-11	To the extent feasible, access roads will be built at right angles to streambeds and washes. Where it is not feasible for access roads to cross at right angles, SDG&E will limit roads constructed parallel to streambeds or washes to a maximum length of 500 feet at any one transmission line crossing location. Such parallel roads will be constructed in a manner that minimizes potential adverse impacts on waters of the U.S. or state-only waters. All access roads constructed parallel to or across these features will be approved by a biological monitor in advance.
ECO-BIO-12	Prior to construction of the 138 kV transmission line, surveys for sensitive plant species known to occur or with a moderate to high potential to occur within the Project area, as described in Chapter 4.4 Biological Resources, will be conducted for work areas and access roads during the appropriate phenological period. A report will be prepared that reflects the finding of these surveys and any associated impacts that would result from construction of the transmission line. This report will be submitted to the CPUC prior to the start of construction.
ECO-BIO-13	Prior to the start of construction, the boundaries of plant populations designated as sensitive by the USFWS or CDFG, and other resources designated sensitive by SDG&E and the resource agencies, will be delineated with clearly visible flagging or fencing. The flagging and/or fencing will be maintained in place for the duration of construction. Flagged and fenced areas will be avoided to the extent practicable during construction activities in that area.
ECO-BIO-14	If impacts to sensitive plant species are unavoidable, SDG&E will work with the appropriate jurisdictional agency (when practicable) to salvage the plant individuals utilizing methods, including removal and stockpiling for replanting on site, removal and transplanting out of surface disturbance area, or removal and salvage by an appropriate resource specialist.
ECO-BIO-15	SDG&E will conduct protocol-level surveys for QCB (<i>Euphydryas editha quino</i>) prior to construction. Once the surveys have been completed, a 45-day report will be submitted to the USFWS and CPUC.
ECO-BIO-19	All steep-walled trenches or excavations used during construction will be inspected twice daily (early morning and evening) to protect against wildlife entrapment. Open construction holes will be covered overnight. Covers will be secured in place nightly, prior to workers leaving the site, and will be strong enough to prevent livestock or wildlife from falling into the hole. Holes and/or trenches will be inspected prior to filling to ensure the absence of mammals and reptiles. Excavations will be sloped on one end to provide an escape route for small mammals and reptiles. If wildlife is located in the trench or excavation and cannot escape unimpeded, the biological monitor will be called immediately to remove them. The biological monitor will make the required contacts with USFWS and CDFG resource personnel and obtain verbal approval prior to removing any entrapped protected wildlife species. If the biological monitor is not qualified to remove the entrapped wildlife, a recognized wildlife rescue agency (such as Project Wildlife) will be employed to remove the wildlife and transport them safely to other suitable habitats.

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APM No.	Description
ECO-BIO-20	Permanent retention basins will be constructed with escape ramps along two sides of the pond to allow entrapped wildlife to escape. The slope of the ramps will not exceed a two to one ratio and will be constructed of non-slippery material, or as specified by the biological monitor.
ECO-BIO-21	If feasible, SDG&E will avoid construction during the nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season, SDG&E will perform a site survey in the area where the work is to occur. This survey will be performed to determine the presence or absence of nesting birds or other species in the work area. If an active nest is identified, a biological monitor will monitor the nest and determine a suitable construction buffer to ensure that the birds are not disturbed. If the birds are federal or state-listed species, SDG&E will consult with the USFWS and CDFG as necessary to determine the construction buffer. Monitoring of the nest will continue until the birds have fledged.
ECO-BIO-22	Prior to construction, SDG&E will remove all existing raptor nests from existing structures that will be affected by Project construction. Removal of nests will occur outside of the raptor breeding season (January to July). If it is necessary to remove an existing raptor nest during the breeding season, a qualified biologist will survey the nest prior to removal to determine if it is active. If the nest is inactive, it will be dismantled and removed from the site promptly under the supervision of a biological monitor. If the nest is determined to be active, it will not be removed and the biological monitor will monitor the nest to ensure nesting activities and/or breeding activities are not disrupted. If the biological monitor determines that Project activities are disturbing or disrupting nesting activities, the monitor will make recommendations to reduce the noise and/or disturbance in the vicinity of the nest.
ECO-BIO-23	Construction night lighting in sensitive habitats will be minimized to the extent feasible. Exterior lighting within the Project area and adjacent to undisturbed habitat will be the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat to the maximum extent practicable.
ECO-BIO-24	Nighttime vehicle traffic volume associated with Project activities will be kept to a minimum and speeds will be limited to 10 miles per hour to prevent mortality of nocturnal wildlife species.
ECO-BIO-26	At the completion of the Project, all construction materials will be removed from the site.
ECO-BIO-27	All new access roads constructed as part of the Project that are not required as permanent access for future Project operation and maintenance will either be restored or permanently closed. Where required, roads will be permanently closed using the most effective feasible and least environmentally-damaging methods appropriate to that area (e.g., stockpiling and replacing topsoil or replacing rock), with the concurrence of the underlying landowner and the governmental agency having jurisdiction.
ECO-BIO-28	Topsoil located in areas to be restored will be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation. Topsoil located in developed or disturbed areas is excluded from this APM.
ECO-BIO-29	Wherever possible, vegetation will be left in place to avoid excessive root damage and to allow for resprouting.
ECO-BIO-30	Temporarily disturbed areas will be reseeded with an appropriate seed mix that does not contain invasive, non-native plant species in accordance with landowner approval.
Cultural and Paleontological Resources	
ECO-CUL-01	Prior to construction, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including the potential for exposing subsurface cultural resources and paleontological resources and to recognize possible buried resources. This training will include presentation of the procedures to be followed upon discovery or suspected discovery of archaeological materials, including Native American remains, and their treatment, as well as of paleontological resources.
ECO-CUL-02	At least 120 days prior to construction, a cultural/historical resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources that were identified during the

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APM No.	Description
	initial studies from major ground-disturbing activities. The analysis and assessment will be prepared to meet the requirements of the CEQA and NEPA. Project component sites that require testing for significance determination will be treated on a case-by-case basis using all applicable criteria.
ECO-CUL-03	A qualified archaeologist will attend preconstruction meetings, as needed, to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring will be noted on the construction plans. The archaeologist's duties will include monitoring, evaluation, analysis of collected materials, and preparation of a monitoring results report conforming to agency guidelines for the Determination of the Significance of Archaeological Sites.
ECO-CUL-04	Known cultural resources that can be avoided will be demarcated as Environmentally Sensitive Areas. Construction crews will be instructed to avoid disturbance of these areas.
ECO-CUL-05	In the event that cultural resources are discovered, the archaeologist will have the authority to divert or temporarily halt ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist will contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. For significant cultural resources, a Research Design and Data Recovery Program will be prepared and carried out to mitigate impacts.
ECO-CUL-06	All collected cultural remains will be cleaned, cataloged, and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified as to species.
ECO-CUL-07	A monitoring results report (with appropriate graphics), which describes the results, analyses, and conclusions of the monitoring program, will be prepared and submitted to SDG&E's Cultural Resource Specialist and Environmental Project Manager following termination of the program. Any noteworthy cultural sites or features encountered will be recorded with the South Coastal Information Center at San Diego State University and with the San Diego Museum of Man.
ECO-CUL-08	Prior to construction, a paleontological resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources from major ground-disturbing activities, such as facility pad grading, trenching, or new access road grading.
ECO-CUL-09	A qualified paleontologist will attend preconstruction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a Master of Science or Doctor of Philosophy in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of Southern California, and who has worked as a paleontological mitigation project supervisor in the region for at least one year. The requirements for paleontological monitoring will be noted on the construction plans.
ECO-CUL-10	A paleontological monitor will work under the direction of the qualified Project paleontologist and will be on site to observe excavation operations that involve the original cutting of previously undisturbed deposits with high paleontological resource sensitivity (i.e., Table Mountain Formation). A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. Because the Miocene-age Table Mountain Formation is locally covered by Pleistocene-age Older alluvium and fanglomerate deposits of unknown thickness, careful monitoring of excavations of the younger deposits will be necessary to ensure that overall monitoring of the Table Mountain Formation is as complete as possible. However, if site-specific geotechnical studies are sufficient to distinguish the geologic contact between the Pleistocene and Miocene sedimentary rock units, this information can be used to more clearly define those portions of the excavations solely sited in the Table Mountain Formation. If this level of detail is achieved prior to excavating activities, a paleontological monitor will need to be on site only on a part-time basis to observe excavation operations that involve the original cutting of previously undisturbed

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APM No.	Description
	deposits of moderate paleontological resource sensitivity (i. e., older alluvium and conglomerates deposits).
ECO-CUL-11	In the event that fossils are encountered, the Project paleontologist will have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. The paleontologist will contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The paleontologist, in consultation with SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation on site. When fossils are discovered, the paleontologist (or paleontological monitor) will recover them along with pertinent stratigraphic data. In most cases, this fossil salvage can be completed in a short period of time. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk-sedimentary-matrix samples for off-site wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections.
Geology and Soils	
ECO-GEO-01	SDG&E will consider the recommendations and findings of final Geotechnical Reports prepared by URS and the contractor's Geotechnical Engineer in the final design of all Project components to ensure that the potential for expansive soils and differential settling is compensated for in the final design and construction techniques. In addition, SDG&E will comply with all applicable codes and seismic standards. The final design will be reviewed and approved by a Professional Engineer registered in the State of California prior to construction.
Hazardous Materials, Public Health and Safety	
ECO-HAZ-01	Prior to construction, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs to comply with the applicable environmental laws and regulations associated with hazardous materials.
ECO-HAZ-04	Soil testing for lead contamination will be conducted for all excavation sites within 500 feet of the informal shooting ranges. In addition, an Unanticipated Soil/Lead Contamination Handling Plan will be prepared to address the procedures to follow in the event that lead contamination is discovered during testing or excavation activities. This plan will contain provisions for a worker lead awareness program, as well as guidelines for the identification, removal, transport, and disposal of lead-impacted materials. This plan will also emphasize that all activities within, or in close proximity to, contaminated areas will follow applicable environmental and hazardous waste laws and regulations.
ECO-HAZ-05	<p>SDG&E will develop a Construction Fire Prevention Plan for the Project and monitor construction activities to ensure its implementation and effectiveness. At a minimum, the Construction Fire Prevention Plan will include the following:</p> <ul style="list-style-type: none"> • A description of the procedures that will be implemented to minimize the potential to start a fire (including vegetation clearing, parking requirements, etc.), • The requirements of Title 14 of the California Code of Regulations, Article 8 #918 "Fire Protection," • Relevant components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009) included in Attachment 4.7 B: SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice, • The fire-fighting equipment (including shovels, axes, and fire extinguishers) that must be maintained on site and in vehicles for the duration of construction, • The appropriate timing and use of fire-protective mats or shields during grinding and welding operations, – emergency response and reporting procedures, and • Relevant emergency contact information. SDG&E will provide a draft copy of the Construction Fire Prevention Plan to the California Public Utilities Commission (CPUC), CAL FIRE, the Bureau of Land Management, County of San Diego, and local community fire departments at least 90 days before the

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APM No.	Description
	start of any construction activities. Agency comments on the Construction Fire Prevention Plan will be provided by SDG&E to all other reviewing parties and SDG&E will resolve each comment in consultation with CAL FIRE. The final Construction Fire Prevention Plan will be approved by CAL FIRE at least 30 days prior to the initiation of construction activities. SDG&E will fully implement the Construction Fire Prevention Plan during all construction activities.
ECO-HAZ-06	SDG&E will implement the Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009) included as Attachment 4.7-B: SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009) during all construction, operation, and maintenance work associated with the Project.
Hydrology and Water Quality	
ECO-HYD-01	SDG&E will compensate for permanent impacts to any waters of the U.S. and state-only waters at a minimum ratio of one to one or as required by the USACE, CDFG, and RWQCB through their respective permitting processes.
ECO-HYD-02	If groundwater wells at ECO Substation are drilled within 0.5 mile of any local wells used for residential water supply, the water level in existing wells will be monitored and frequent communications will occur with the owner during construction to ensure that water availability is not adversely affected.
Noise	
ECO-NOI-1	Construction activities will occur during the times established by the local ordinances (generally between 7 a.m. and 7 p.m. Monday through Saturday), with the exception of certain activities where nighttime and weekend construction activities are necessary, including, but not limited to, delivery of substation transformers, filling of substation transformers, system transfers, pouring of foundations, and pulling of the conductor, which require continuous operation or must be conducted during off-peak hours per agency requirements. For any work that cannot occur during those timeframes, SDG&E will limit construction activities so that noise will not exceed an hourly average of 45 dB when measured at the border of the nearest parcel with an inhabited residence. If activities cannot be limited to meet this noise threshold, SDG&E will communicate the exception to San Diego County in advance of conducting the work that will exceed the threshold. If necessary, SDG&E will temporarily relocate residents occupying properties located less than 220 feet from construction activities on an as-needed basis for the duration of construction activities that would affect them (SDG&E 2011).
ECO-NOI-2	SDG&E will provide notice of the construction plans to all property owners within 300 feet of the Project by mail at least one week prior to the start of construction activities. The announcement will state the construction start date, anticipated completion date, and hours of operation, and well as provide a telephone contact number for receiving questions or complaints during construction
ECO-NOI-4	The use of explosives to assist with the excavation of rock will be prohibited within 600 feet of the boundary of any occupied parcels zoned for residential use and within 430 feet of the boundary of any occupied parcels zoned for agricultural use. If the use of explosives cannot be avoided in these locations, SDG&E will temporarily relocate the impacted occupants on an as-needed basis for the duration of the explosive use in their locations.